General

Guideline Title

Best evidence statement (BESt). Prognosis of infant development with plagiocephaly, torticollis.

Bibliographic Source(s)

Cincinnati Children's Hospital Medical Center. Best evidence statement (BESt). Prognosis of infant development with plagiocephaly, torticollis. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2011 Jun 3. 5 p. [10 references]

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

The strength of the recommendation (strongly recommended, recommended, or no recommendation) and the quality of the evidence (1a-5) are defined at the end of the "Major Recommendations" field.

It is recommended that parents wishing to know if their child's head shape will affect development be provided the prognostic information that plagiocephaly alone is not a predictor of developmental delay.

Note: In very young infants (average age 22 weeks), developmental delay appears related to sleep position, muscle tone, activity level, male gender and neck dysfunction. (Hutchison et al., 2004 [2a]; Hutchinson, Stewart, & Mitchell, 2009 [4a]; Hutchison, Stewart, & Mitchell, 2011 [2a]).

Definitions:

Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain

Quality Level	Definition
5	Other: General review, expert opinion, case report, consensus report, or guideline

†a = good quality study; b = lesser quality study

Table of Recommendation Strength

Strength	Definition
"Strongly recommended"	There is consensus that benefits clearly outweigh risks and burdens (or visa-versa for negative recommendations).
"Recommended"	There is consensus that benefits are closely balanced with risks and burdens.
No recommendation made	There is lack of consensus to direct development of a recommendation.
Dimensions: In determining the strength of a recommendation, the development group makes a considered judgment in a consensus process that incorporates critically appraised evidence, clinical experience, and other dimensions as listed below.	
1. Grade of the Body of Evidence (see note above) 2. Safety/Harm 3. Health benefit to patient (direct benefit) 4. Burden to patient of adherence to recommendation (cost, hassle, discomfort, pain, motivation, ability to adhere, time) 5. Cost-effectiveness to healthcare system (balance of cost/savings of resources, staff time, and supplies based on published studies or onsite analysis) 6. Directness (the extent to which the body of evidence directly answers the clinical question [population/problem, intervention, comparison, outcome]) 7. Impact on morbidity/mortality or quality of life	

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

- Torticollis
- Positional plagiocephaly

Guideline Category

Evaluation

Risk Assessment

Clinical Specialty

Family Practice

Internal Medicine

Pediatrics

Intended Users

Advanced Practice Nurses

Nurses

Occupational Therapists

Physical Therapists

Physician Assistants

Physicians

Guideline Objective(s)

To evaluate, among infants with torticollis and positional plagiocephaly, if severe plagiocephaly compared to less severe plagiocephaly predicts developmental delay

Target Population

Infants with torticollis and positional plagiocephaly

Interventions and Practices Considered

Provision of prognostic information to parents

Major Outcomes Considered

Developmental delay

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Search Strategy

Key words: position$ and plagiocephaly and child development; position$ and plagiocephaly and development; cognitive delays and skull; cognitive delays and plagiocephaly; developmental delays and plagiocephaly; flattened heads; positional plagiocephaly

Limits: English, Children, Infants, all dates inclusive

Databases: Canchild, CINAHL Plus with Full Text/EBSCOHost, Cochrane of Systematic Reviews, Ovid, PubMed, Pedro

Dates of retrieval: retrieved between 7/29/10 and 4/28/11

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
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5	Other: General review, expert opinion, case report, consensus report, or guideline

†a = good quality study; b = lesser quality study

Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Table of Recommendation Strength

Strength	Definition
"Strongly recommended"	There is consensus that benefits clearly outweigh risks and burdens (or vice-versa for negative recommendations).
"Recommended"	There is consensus that benefits are closely balanced with risks and burdens.

Strength	Definition
No recommendation made	There is a lack of consensus to direct development of a recommendation.

Dimensions: In determining the strength of a recommendation, the development group makes a considered judgment in a consensus process that incorporates critically appraised evidence, clinical experience, and other dimensions as listed below.

1. Grade of the Body of Evidence
2. Safety/Harm
3. Health benefit to the patients (direct benefit)
4. Burden to patient of adherence to recommendation (cost, hassle, discomfort, pain, motivation, ability to adhere, time)
5. Cost-effectiveness to healthcare system (balance of cost/savings of resources, staff time, and supplies based on published studies or onsite analysis)
6. Directness (the extent to which the body of evidence directly answers the clinical question [population/problem, intervention, comparison, outcome])
7. Impact on morbidity/mortality or quality of life

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This Best Evidence Statement has been reviewed against quality criteria by 2 independent reviewers from the Cincinnati Children's Hospital Medical Center (CCHMC) Evidence Collaboration.

Evidence Supporting the Recommendations

References Supporting the Recommendations

Hutchison BL, Hutchison LA, Thompson JM, Mitchell EA. Plagiocephaly and brachycephaly in the first two years of life: a prospective cohort study. Pediatrics. 2004 Oct;114(4):970-80. PubMed

Hutchison BL, Stewart AW, Mitchell EA. Characteristics, head shape measurements and developmental delay in 287 consecutive infants attending a plagiocephaly clinic. Acta Paediatr. 2009 Sep;98(9):1494-9. PubMed

Hutchison BL, Stewart AW, Mitchell EA. Deformational plagiocephaly: a follow-up of head shape, parental concern and neurodevelopment at ages 3 and 4 years. Arch Dis Child. 2011 Jan;96(1):85-90. PubMed

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Health benefits of sharing the information about plagiocephaly and developmental delay with parents: reassures parents that their child's head shape is not causing a developmental delay and aids parents in making a decision about the plan of care.
- Health benefits of using a standardized tool to detect developmental delays: can insure that delays are identified and addressed in a timely manner.

Potential Harms

- Sharing information about the possibility of developmental delays in their infant can heighten parental anxiety about their child's condition.
- Because the Ages & Stages Questionnaire (ASQ) is a screening tool, not all skills in prone are assessed; a child can score within normal limits on the ASQ and still have delays in selected gross motor skills in prone such as pivoting. If the ASQ is used exclusively and not supplemented by the therapist's clinical observations, opportunities for building strength and postural control in the neck and upper extremities could be missed.

Qualifying Statements

Qualifying Statements

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2011 Jun 3

Guideline Developer(s)

Cincinnati Children's Hospital Medical Center - Hospital/Medical Center

Source(s) of Funding

Cincinnati Children's Hospital Medical Center

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

Group/Team Members: Pamela M. Hudson, PT II, MPH; Division of OT/PT/TR; Mary Ellen Meier, RN, MSN, CPN; Center for Professional Excellence and Business Integration, Research and Evidence-Based Practice, EBP Mentor

Financial Disclosures/Conflicts of Interest

Not stated

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the Cincinnati Children's Hospital Medical Center.

Print copies: For information regarding the full-text guideline, print copies, or evidence-based practice support services contact the Cincinnati Children's Hospital Medical Center Health James M. Anderson Center for Health Systems Excellence at EBDMInfo@cchmc.org.

Availability of Companion Documents

The following are available:

- Judging the strength of a recommendation. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2008 Jan. 1 p. Available from the Cincinnati Children's Hospital Medical Center .
- Grading a body of evidence to answer a clinical question. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 1 p. Available from the Cincinnati Children's Hospital Medical Center .
- Table of evidence levels. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2008 Feb 29. 1 p. Available from the Cincinnati Children's Hospital Medical Center .

Print copies: For information regarding the full-text guideline, print copies, or evidence-based practice support services contact the Cincinnati Children's Hospital Medical Center Health James M. Anderson Center for Health Systems Excellence at EBDMInfo@cchmc.org.

Patient Resources

None available

NGC Status

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